



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,080	12/01/2003	Dragan Tomic	MSFT-2793/304866.01	4783
41505	7590	12/16/2008	EXAMINER	
WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)				CHEN, TE Y
CIRA CENTRE, 12TH FLOOR				
2929 ARCH STREET				
PHILADELPHIA, PA 19104-2891				
				ART UNIT
				PAPER NUMBER
				2161
				MAIL DATE
				DELIVERY MODE
				12/16/2008 PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/726,080	TOMIC ET AL.	
	Examiner	Art Unit	
	SUSAN Y. CHEN	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 October 2008.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 8,10-12,20-25 and 27-30 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 8,10-12,20-25 and 27-30 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Oct. 15, 2008 has been entered.

Claims 8, 10-12, 20, 21-25, and 27-30, are pending for examination, claims 8,20 and 25 have been amended; claims 1-7, 9, 13-19, 26 and 31-36 have been canceled.

Claim Rejections - 35 USC § 101

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. 101 defines four categories of inventions that Congress deemed to be the appropriate subject matter of a patent: processes, machines, manufactures and compositions of matter. The latter three categories define "things" or "products" while the first category defines "actions" (i.e., inventions that consist of a series of steps or acts to be performed). See 35 U.S.C. 100(b) ("The term process' means process, art, or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.").

Federal courts have held that 35 U.S.C. 101 does have certain limits. First, the phrase "anything under the sun that is made by man" is limited by the text of 35 U.S.C. 101, meaning that one may only patent something that is a machine, manufacture, composition of matter or a process. See, e.g., Alappat, 33 F.3d at 1542, 31 USPQ2d at 1556; >In re< Warmerdam, 33 F.3d *>1354,< 1358, 31 USPQ2d *>1754,< 1757 (Fed. Cir. 1994). Second, 35 U.S.C. 101 requires that the subject matter sought to be patented be a new and useful" invention. Accordingly, a complete definition of the scope of 35 U.S.C. 101, reflecting Congressional intent, is that any new and useful process, machine,

Art Unit: 2161

manufacture or composition of matter under the sun that is made by man is the proper subject matter of a patent.

The subject matter courts have found to be outside of, or exceptions to, the four statutory categories of invention is limited to abstract ideas, laws of nature and natural phenomena. While this is easily stated, determining whether an applicant is seeking to patent an abstract idea, a law of nature or a natural phenomenon has proven to be challenging. These three exclusions recognize that subject matter that is not a practical application or use of an idea, a law of nature or a natural phenomenon is not patentable. See, e.g., *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874) ("idea of itself is not patentable, but a new device by which it may be made practically useful is"); *Mackay Radio & Telegraph Co. v. Radio Corp. of America*, 306 U.S. 86, 94, 40 USPQ 199, 202 (1939) ("While a scientific truth, or the mathematical expression of it, is not patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be."); *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759 ("steps of locating' a medial axis, and creating' a bubble hierarchy . . . describe nothing more than the manipulation of basic mathematical constructs, the paradigmatic abstract idea"). The courts have also held that a claim may not preempt ideas, laws of nature or natural phenomena. The concern over preemption was expressed as early as 1852. See *Le Roy v. Tatham*, 55 U.S. 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."); *Funk Brothers Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 132, 76 USPQ 280, 282 (1948) (combination of six species of bacteria held to be nonstatutory subject matter).

Accordingly, one may not patent every "substantial practical application" of an idea, law of nature or natural phenomena because such a patent would "in practical effect be a patent on the [idea, law of nature or natural phenomena] itself." *Gottschalk v. Benson*, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

Claims 20-23, are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

As to claim 20, which recites a method of validating Extensible Markup Language (XML) instances in the claimed preamble, however, in the body of the claim, it failed to include any hardware or machine to actually perform the claimed utilities, thus, the whole claim seemed to be merely a process of thinking which is deemed to be non-statutory. *In re Bilski*.

As to claim 21 – 23, these dependent claims failed to resolve the issues addressed above, hence, are rejected for the same reason.

To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 8, 10-12, 20, 21-25, and 27-30, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 8, the recitation “A database system for storing data **comprising** Extensible Markup Language (XML) instances, said database system **comprising** generating a container for a plurality of XML schema namespaces universal resource identifiers (URIs), each namespace URI uniquely identifying a collection of element type **and** attribute names **and** identifying a location of a schema document corresponding to **and** defining the uniquely identified collection **and** thereby specifying a schema for any of a plurality of XML instances conforming to said schema document, each XML instance **comprising** a set of XML data conforming to the schema specified by a namespace URI” is unclear, because the lengthy recitation repeatedly used the open

Art Unit: 2161

ended phrase “comprising”, and the word “and” which failed to distinctly point out which unit performs which function. In addition, it also failed to clearly specify which unit contains which attributes.

As to claims 20 and 25, these claims have the same defects as claim 8, in form of method and a computer readable storage medium, hence, they are indistinct also.

As to claims 10 – 12, 21 - 25, and 26 - 30, these claims have the same defects as their base claims, hence, are rejected for the same reason.

Because the ambiguous nature of instant invention, the following art rejection is to the best of the examiner ascertain.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8, 10-12, 20-25 and 27-30, are rejected under 35 U.S.C. 102(e) as being anticipated by Murthy et al. (U.S. Publication No. 7,096,224, hereinafter referred as Murthy).

Claim 8:

Murthy discloses a database system for storing data comprising Extensible Markup Language (XML) instances, said database system [e.g., Abstract], comprising:
a processor [e.g., the hardware processor 204, Fig. 2 and associated texts];
a computer readable storage medium having program code that causes said processor to perform a plurality of operations [e.g., Abstract, Fig(s). 1-2 and associated texts], said operations comprising:

generating a container for a plurality of XML schema namespaces universal resource identifiers (URIs), each namespace URI uniquely identify a collection of element type and attribute names [e.g., the use of database server 104 and XML schema mapper of Fig. 1 to perform SQL/XML mapping technique at col. 4, lines 10 – 38, wherein the default mapping of XML simple types are deemed to include URI(s) as shown in the table at Col. 11 - 12];

placing in the container at least two XML schema namespace universal resource identifiers (URIs) [e.g., col. 10, section: Mapping XML schemas to Object types – a Detailed Example starting at col. 9, line 37 -67, the use of table “Default mapping of XML simple types to SQL” at col.(s), 11-12];

validating an XML instance according to a schema document identified by at least one of said URLs [e.g., col. 4, lines 13-14, & lines 52-col. 5, lines 52 and the Example at col. 17] ;

storing an XML instance in a database column [e.g., col. 3, lines 54-57, col. 9, lines 55-67];

typing said database column with said container so as to require that the XML instance stored in the column and any other XML instance stored in the column conforms to the schema of one of the XML schema namespace in the container [e.g., the use of create Schema-based XMLTYPE Tables and column technique at col. 9, line 37- col. 10, line 55, the use of table “Default mapping of XML simple types to SQL” at col.(s), 11-12] wherein said typing comprises validating any XML instance existing in said database column prior to said typing [e.g., col. 26, lines 21 - 34].

Claim 10:

Except the limitations recited in claim 8, Murthy further discloses that a program code executable by said processor further comprising an import function which modifies said container so that it refers to at least one schema component in an XML schema namespace other than XML schema namespaces identified by said at least two XML schema namespace URIs [e.g., the use of table “Default mapping of XML simple types to SQL” at col.(s), 11-12].

Claim 11:

Except the limitations recited in claim 8, Murthy further discloses a program code executable by said processor that comprises an include function which allows assembly of schema component for a single namespace from several schema documents [e.g. col. 4, lines 10 – 37, XML Schema Registration at col. 4, line 40 – col. 5, line 52].

Claim 12:

Except the limitations recited in claim 8, Murthy further discloses a program code executable by said processor that comprises an alter function which adds schema components to XML schema namespaces within said container [e.g., col. 4, lines 20-21].

As to claims 20-24, these claims recite the same features as claims 8, 10-12 with different wording, hence, are rejected for the same reason.

As to claims 25, 27-30, the claimed instructions and software means are deemed to be inherent by the functional steps as recited in claims 8-12 and 20-24, hence are rejected for the same reason.

Response to Arguments

Applicant's arguments based on newly amended limitations with respect to claims 8, 10-12, 20, 21-25, and 27-30 have been considered but are moot in view of the new ground(s) of rejection.

Furthermore, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., typing a column according to an XML schema collection object that contains references to multiple schemas) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Manikutty et al. (U.S. Patent No. 7,120,645) which disclosed techniques for rewriting XML queries directed to relational database constructs.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN Y. CHEN whose telephone number is (571)272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susan Y Chen/
Partial Sig. Examiner
Art Unit 2161

December 15, 2008